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ABSTRACT

Evaluated was the program, which followed the resource room model, to provide supplementary individual and small group instruction to 360 mainstreamed children (in grades k-6) diagnosed as neurologically impaired. Aside from providing direct instructional services, program teachers consulted with regular class teachers about problems for students of mutual concern. Evaluation of this program requirement (consultation) showed that the quality of consultation varied as an apparent joint function of program teachers' experience and the extent of support given the program by school administrators in the various centers. Program objectives of significantly improved reading and mathematic skills for participating students were generally achieved. (Author/SBH)

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EVALUATION REPORT

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MAINSTREAMING - SUPPORTIVE EDUCATIONAL SERVICES FOR THE LEARNING DISABLED (DSEPPS)

1975-1976

Martin B. Miller

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An evaluation of a New York City School District educational project funded under Title I of the Elementary and Secondary Education Act of 1965 (PL 89-10) performed for the Board of Education of the City of New York for the 1975-76 school year.

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CHAPTER I: THE PROGRAM

This was the successor to a 1974-75 Title I program which served learning disabled children on a twice-a-week itinerant basis in 92 different schools, city-wide. In 1974-75, Title I teachers assigned to the program had little opportunity to interact and consult with tax-levy staff on behalf of the children they served because of the itinerant nature of the Title I services. Therefore in 1975-76, the program was re-designed so that each Title I teacher was assigned full-time to one of 12 schools in 4 boroughs (excluding Staten Island), as limited by funding constraints.

As set forth in the project proposal, the program sought to provide supplementary individual and small group instruction to 360 youngsters diagnosed as neurologically impaired in grades 2-6. The project was subsequently modified to include services to some children in Kindergarten and grade 1. Title I teachers were to implement individual educational prescriptions devised by the Evaluation and Placement Unit, which also confirmed the need for such services for each youngster in the program. Each child was to be seen an average of four times a week. Supplementary instruction was primarily intended on behalf of improving skills in reading and math, and made use of commercial materials published by DLM, Sullivan, Stein, Ideal, etc., as well as teacher designed materials.

A noteable aspect of the program design was its intent to facilitate the maintenance of served youngsters in the regular-class "mainstream." This was to be accomplished not only through the supplementary individual and small group instruction which the program provided, but also through consultation

with the youngster's regular classroom teachers and Title I teachers about youngsters' educative strengths and weaknesses and instructional modalities in this regard. As noted above, the full-time assignment of Title I teachers to a single site was predicated at least in part on the premise that this would sharpen the Title I teacher's consultative role. In the project proposal, it was specified that consultative exchanges between Title I and tax-levy personnel would be accomplished through regular meetings and written reports.

As specified in the project proposal, project staff was to include 12 teacher-specialists (as already noted), plus a guidance counselor to facilitate service provision and to act as liaison to the schools and related agencies, a supervisor to assure program quality control, and a project secretary. The supervisor was responsible for recruitment and training of teacher-specialists, who were to be selected for their educational background and experience with neurologically impaired youngsters. Each teacher-specialist was to have a caseload of approximately 30 youngsters. Initial training and orientation of teacher-specialists took place in September, 1975, and there were several additional feedback sessions throughout the school year.

To initially acquire youngsters for the program, teacher-specialists spoke to the principals, guidance counselors and teachers in their assigned schools and asked such tax-levy personnel to refer likely candidates for supportive services. In several instances, the teacher-specialists observed children as they functioned in their regular classes and made recommendations for likely referrals. Subsequently, Evaluation and Placement personnel evaluated project youngsters and typically confirmed the basis for placing youngsters in the program.

CHAPTER II: EVALUATIVE PROCEDURES

The objectives of evaluation for this project were three-fold:

1. To determine if, as a result of participation in the program, neurologically impaired pupils achieve a statistically significant improvement in their reading scores.

2. To determine if, as a result of participation in the program, neurologically impaired pupils achieve statistically significant improvement in their mathematics scores.

3. To determine the extent to which the program as actually carried out, coincided with the program as described in the project proposal.

The first two objectives were implemented by administering the Reading and Math subtests of the Peabody Individual Achievement Test to youngsters in grades K-3, and the Reading and Math subtests of the Stanford Achievement Test to youngsters in grades 4-6, on a pre/post-test basis. Pre-testing was conducted during October, 1975, while posttesting took place during May, 1976.

Data from the tests were analyzed by the "Real (Treatment) vs. Anticipated Posttest (Without Treatment)" design. The differences between real posttest and anticipated posttest grade equivalent means were compared for statistical significance with correlated *t*-tests. Separate analyses were conducted for Reading and Math, grade by grade, and also for combined grades by academic area according to the test which was administered (PIAT or SAT).

The third evaluation objective was implemented by means of visitations to each of the 12 program sites, where the program was observed, materials were inspected, and teacher-specialists and in some instances tax-levy personnel were

interviewed. Each site was visited twice, once during the Fall of 1975 and again during the Spring of 1976. In addition, discussions were held with project personnel assembled at meetings close to the beginning and the termination of the project.

CHAPTER III: FINDINGS

Of the 458 children on program registers at one time or another throughout the duration of the program, 363 children received both pre- and post-testing in Reading and Math. The results of these tests, reported by grade, are shown in Tables 1 and 2, for reading and math respectively.

INSERT TABLES 1 and 2

Inspection of Tables 1 and 2 shows that the program objectives for improvement in reading and math scores of participating youngsters is achieved to a statistically significant extent over what would be expected without special treatment for grades 2-5, inclusive. Improvement in math only is statistically significant for the small group of Kindergarten children. Improvements in reading for Kindergarten children and in both reading and math for youngsters in grade 6 are <u>not</u> significantly greater than would be anticipated without special program intervention. These results are generally supportive of program effectiveness, although that evidently decreases with the grade level of the children being served. It is noteworthy that when these results are collapsed across grade levels (see Historical Regression Design Table in Appendix A), those results which include 6th-grade students are significant for both reading and math. This is similarily the case for reading scores when they are collapsed across grades to include Kindergarten students. Thus, <u>overall</u> program effectiveness in terms of both reading and math is clearly established.

Table 1

MEAN GRADE EQUIVALENT READING ACHIEVEMENT, BY STUDENT GRADE LEVEL

Grade	N	Test Used	Pre-Test Mean	Predicted Post-Test Mean	Actual Post-Test Mean	Mean Difference	t
K	9	PIAT	.73	.74	1.17	.43	1.81[a]
1	60	PIAT	.95	1.26	1.49	.23	2.58*
2	102	PIAT	1.34	1.54	2.00	.46	7.98***
3	71	PIAT	1.99	2.14	2.57	.43	10.82***
4	59	SAT	2.22	2.51	2.82	.31	3.53***
5	37	SAT	2.69	2.73	2.94	.21	3.20**
6	25	SAT	3.32	3.44	3.45	.01	.08[b]

*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$

[a]$p \leq .20$, not significant; [b]$p \geq .20$, not significant

Table 2

MEAN GRADE EQUIVALENT MATHEMATICS ACHIEVEMENT, BY STUDENT GRADE LEVEL

Grade	N	Test Used	Pre-Test Mean	Predicted Post-test Mean	Actual Post-test Mean	Mean Difference	t
K	9	PIAT	0.0	0.0	.42	.42	3.96**
1	60	PIAT	.52	.86	1.53	.67	5.60***
2	102	PIAT	1.03	1.22	1.89	.67	8.91***
3	71	PIAT	2.03	2.41	2.94	.53	7.62***
4	59	SAT	2.33	2.55	2.99	.44	4.58***
5	37	SAT	3.52	3.62	3.90	.28	2.54*
6	25	SAT	3.74	3.88	3.90	.02	.16[b]

*$p \leq .05$; **$p \leq .01$; ***$p \leq .001$

[a] $p \leq .20$, not significant; [b] $p \geq .20$, not significant

Population Characteristics: It should be noted that there was considerable variation from site to site in terms of the distribution of grades from which youngsters served by the program were drawn, as well as in terms of the number of youngsters served at some point by the program. Grade distributions varied such that, for example, one teacher-specialist (of 12 in the project) served all Kindergarten children involved in the program, three other teacher-specialists account for 2/3 of the 1st-graders who were served, and two still different teacher-specialists account for almost all of the 6th-graders who were served. Since 6th-grade children did not show significant improvement in their reading or math achievement scores, a possible linkage between quality of services and children served may be indicated. Further in this regard, the two sites which served the majority of 6th-grade children in the program were involved in turnovers of teacher-specialists about midway through the program. Still further, when the number of youngsters carried at some point on the program registers at the various sites are compared, these range from a low total of 31 to a high of 56, and the two highest numbers are the same two sites with the majority of 6th-grade children just referred to. Variations in the number of cases carried at some point on a site register are partly a function of variations in the case referral process from site to site. That is, it appears that in a few sites there was a tendency to initially refer some children to the special program who were achieving close to grade level in one or both academic areas. Typically, these children were terminated in the program and replaced with more appropriate cases who were in greater need of services.

Despite all of the foregoing, the possibility that modalities and techniques used in the program are inappropriate for 6th-grade children cannot be ruled out, and this question remains for evaluation of future cycles of this or a similar program to determine.

Observation of Program Activities

The general success of the program in terms of meeting its objectives of students' improvement in reading and math may be taken as a considerable accomplishment in view of some of the circumstances under which the program was obliged to operate. In several instances, classrooms assigned to the project were inappropriately located off the gym or the cafeteria which must have created distracting effects. In most cases, the room was either too large or too small, even for competent small group instruction. In one case, the assigned room was a filthy place adjoining the gym which was apparently also used for mimeographing school materials. Typically, the room was on a high floor, and since teacher-specialists had no paraprofessional help, they were obliged to deliver children from one group to their respective classes and then pick up children for the next group from all over the building.

Despite these related factors which tended to make their work physically taxing, at the least, teacher-specialists appeared to be responsive, good-humored and energetic in their teaching. Furthermore, in almost all instances, children seemed eager to participate and reluctant to leave the resource room. On several occassions during evaluation visits, children would come to the door of a given resource room asking if it was time for their session. At the very least, teacher-specialists had evidently been well-selected for their wide-ranging responsibilities.

Further in this regard, teacher-specialists were generally well prepared for instructional sessions, varying routines and employing materials that were appropriate for the specific groups they worked with. This was further reflected in the folders of participating students, which were indeed individualized in their contents and foci.

While in a few instances rooms were drab and unattractive, most teacher-specialists had decorated their rooms attractively and functionally, often incorporating charts to plot children's progress in several domains. In general, teacher-specialists made the most of available space.

The Consultation Role. A primary focus of the program was to encourage interactions between teacher-specialists and tax-levy personnel. The objectives of such interactions were multi-fold and included the need for continuity of optimal services between resource room and regular classroom, the opportunity to exchange observations in order to validate or perhaps revise services provided in either setting, increasing the sensitivity of regular-class teachers to the needs of the children being served, increasing the regular-class teachers' sensitivity to similar needs in children they might encounter in the future, and enhancing tax-levy personnel's confidence and skills in often being able to respond to such needs.

The quality of consultation varied widely among the 12 settings. In all cases, teacher-specialists prepared summary report forms on students they served and gave or sent those to the regular-class teachers. However, these were supplemented or followed up with meetings which ranged from quite informal encounters on a hit-and-miss basis, such as during lunch, to formally structured

workshops sponsored by the school's administration, during which the teacher-specialist provided training on characteristics of children with learning disabilities and ways to meet their needs. Such workshops took place in at least two sites.

On the basis of interviews with teacher-specialists, it appears that their performance as consultants was most effective when they were aggressive about that function in seeking out tax-levy personnel and when school administration personnel were likely to be flexible as well as sensitive to the needs of learning disabled children. In this case, the teacher-specialist would seek and find a sympathetic ear in the school principal who would then establish enabling machinery for the teacher-specialist to optimize her consulting function. However, in too many instances in the program, school administrators showed half-hearted support of the program's objectives, as indicated by their willingness to house the site's program inappropriately, or in two separate instances, when administration office personnel did not know where the resource room was located even when it was identified by the teacher's as well as the program's name.

Extent of Implementation of Recommendations from 1974-75 Program Evaluation

In the evaluation report prepared by Philip Reiss for the 1974-75 version of this program (Function No. 09-58619), 8 recommendations were made. Each of those recommendations are listed verbatim below, together with an estimate of the extent to which they were implemented in 1975-76.

1. "Provide the program only in schools in which 10 or more eligible children have been identified. This will enable the assignment of teachers

full-time (or at least for two full days) to participating schools." This recommendation appears to have been fully implemented.

2. "Simplifying the procedures by which children are identified as eligible for the program. While full clinical evaluations are important, their absence should not deny a child access to a needed service." This recommendation was fully implemented, but not without some negative effect, since it was responsible for inordinately large and sometimes inappropriate caseloads in some sites.

3. "Increase the role of school staff in identifying children eligible for this program." This was fully implemented, as related to Recommendation 2 above.

4. "Restrict eligibility for the program to children for whom mainstreaming has been recommended; children awaiting special class placements should not be included." This recommendation was generally implemented, although assessment of individual cases attached to the program by the Evaluation and Placement Unit did lead to placement of some children in special classes.

5. "Replacement and/or additional staff selection should be based on experience and knowledge in the education of learning disabled brain-injured children." This was fully implemented.

6. "Increase the opportunities for teacher consultation and in-service meetings by including some time allocation for such activities in itinerant teachers' schedules." This recommendation was implemented in spirit if not in practice. There was a clear emphasis in the 1975-76 program on consulting activities, but the loss of paraprofessional support personnel led to an increase of work load to teacher-specialists which may have been difficult to overcome in terms of specific time allocation for consultation purposes.

7. "Change the title of the program to avoid attaching labels with negative connotation to children served. A neutral label, such as 'Supportive Reading and Arithmetic' might be considered." This was generally implemented, since the program's title was changed from "Reading and Arithmetic for Mainstreaming Brain-Injured Children" to "Mainstreaming - Supportive Educational Services for the Learning Disabled," and many teacher-specialists put signs on their doors referring to "Supportive Services" without negative labels.

8. "Extend the duration of the program and begin it as early as possible in the school year." This was fully implemented since the 1975-76 program ran for the full school year.

Teacher Training. It should finally be noted that the orientation sessions conducted by the program supervisor were highly informative and exceptionally well-organized, as well as providing a free and open forum for resolution of teacher-specialists' problems.

CHAPTER IV: SUMMARY OF MAJOR FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Summary of findings. Pupils in the program overall showed clear gains in reading and math skills, that are attributable to the program's intervention, although when results were examined one grade at at time, students in grade 6 did not show significant improvement over what would be anticipated without intervention. This latter finding may be attributable to a combination of difficulties in 2 of the 12 sites where the program was located. While quality of instruction appeared to be uniformly high, consulting services by teacher-specialists across the program sites was more uneven. High performance in the latter regard appeared to be associated with both the aggressiveness of teacher-specialists in pursuing their consultant roles and the willingness of administrators at the various sites to facilitate the consultant function for teacher-specialists.

Conclusions. The reading and math skills aspect of the program was generally successful, but the continuity of program effectiveness from special setting to the regular class is less clear.

Recommendations

1. This program should be recycled because of its success in significantly improving basic academic skills in a large number of students who are regarded as learning disabled.

2. Skills on behalf of the consulting function by teacher-specialists should be sharpened through specialized training. Budgetary considerations permitting, a teacher-trainer who is expert in consultation of the type required by the program should be retained.

3. Schools selected as program sites should be chosen on the basis of clear evidence of the school administration's cooperation with and sharing of the program's objectives.

4. The liaison function in the program should be expanded to increase contact between the program and the local community, as well as with other specialized programs in the school (e.g., ESL) whose collaboration would lead to enhanced program effectiveness.

5. Opportunities should be provided for inter-visitation between teachers.

APPENDIX A

Table 9 Historical Regression Design (6-step Formula) for reporting norm referenced achievement tests in Reading and Mathematics.

In the Table below, enter the requested assessment information about the tests used to evaluate the effectiveness of major project component/activities in achieving cognitive objectives. This form requires means obtained from scores in the form of grade equivalent units as processed by the 6-step formula.(see District Evaluator's Handbook of Selected Evaluation Procedures, 1974, p. 29-31) Before completing this table, read all footnotes. Attach additional sheets if necessary.

T/E #09-69 01 Mainstreaming - Supportive Educational Services for the Learning Disabled

Component Code	Activity Code	Test Used 1/	Form Pre	Form Post	Level Pre	Level Post	Total N 2/	Group ID 3/	Number Tested 4/	Pretest Date	Pretest Mean	Predicted Posttest Mean	Actual Posttest Date	Actual Posttest Mean	Obtained Value of t
6 0 1 3 4 6	7 2 0	PIAT	A	A			309	13	275	10/75	1.55	1.71	5/76	2.13	12.27, p<.001
6 0 9 1 3 4 6	7 2 0	PIAT	A	A			309	13	275	10/75	1.37	1.59	5/76	2.23	14.02, p<.001
6 0 8 1 4 4 6	7 2 0	CAT	A	A			125	14	87	10/75	2.56	2.65	5/76	2.82	2.72, p<.01
0 0 9 1 4 4 6	7 2 0	SAT	A	A			125	14	87	10/75	3.06	4.82	5/76	5.11	4.13, p<.001

1/ Identify the test used and year of publication (MAT-58, CAT-70, etc.).
2/ Total number of participants in the activity.
3/ Identify the participants by specific grade level (e.g., grade 3, grade 5). Where several grades are combined, enter the 4th and 5th digits of the component code.
4/ Number of pupils for whom both pre and post test data are provided.

#09-6906

APPENDIX B

PROGRAM ABSTRACT

	Component Code	Activity Code	Objective Code
A.	6 0 9 1 3	7 2 0	8 0 1
B.	6 0 9 1 3	7 2 0	8 0 1
C.	6 0 9 1 4	7 2 0	8 0 1
D.	6 0 9 1 4	7 2 0	8 0 1

Mainstreaming - Supportive Educational Services for the Learning Disabled (DSEPPS)

The program operated in 12 centers, located in public schools distributed throughout 4 New York City boroughs. The teacher for each center drew students from regular classes into small remedial instructional groups, following the resource room model. Each teacher worked with 30 - 35 students from an average of 15 different classes. Aside from providing direct instructional services, program teachers also consulted with regular class teachers about problems for students of mutual concern, as indicated in the project proposal. However, evaluation of this program requirement showed that the quality of consultation varied as an apparent joint function of program teachers' experience and the extent of support given the program by school administrators in the various centers. Program objectives of significantly improved reading and mathematic skills for participating students were generally achieved.

APPENDIX C

OFFICE OF EDUCATIONAL EVALUATION - DATA LOSS FORM

(attach to NARRATIVE) Function # _____

In this table enter all Data Loss information. Between the MIR and this form, all participants in each activity must be accounted for. The component and activity codes used in completion of the MIR should be used here so that the two tables match. See definitions below table for further instructions.

Component Code	Activity Code	(1) Group I.D.	(2) Test Used	(3) Total N	(4) Number Tested/ Analyzed	(5) Participants Not Tested/ Analyzed N	(5) %	(6) Reasons Why Students Were Not Tested, Or If Tested, Were Not Analyzed	Number
									4/#1, 7/#2,
6 0 8 1 3 4 6	7 2 0	46	PIAT	309	275	34	11.0		12/#3, 6/#4
									1/#5, 1/#7
									3/#8
6 0 8 1 4 4 6	7 2 0	46	SAT	125	87	38	30.4	CODE:	2/#1, 3/#2
								1. Illness 2. entered too late for pre-test	5/#3, 24/#5
								3. moved out of district 4. assigned to different program	2/#6, 2/#7
								5. dropped from program 6. behavior problem	
								7. truancy 8. unexplained long-term absence	

(1) Identify the participants by specific grade level (e.g., grade 3, grade 9). Where several grades are combined, enter the last two digits of the component code.
(2) Identify the test used and year of publication (MAT-70, SDAT-74, Houghton Mifflin (IPMS) Level 1 etc.)
(3) Number of participants in the activity.
(4) Number of participants included in the pre and posttest calculations.
(5) Number and percent of participants not tested and/or not analyzed.
(6) Specify all reasons why students were not tested and/or analyzed. If any further documentation is available, please attach to this form. If further space is needed to specify and explain data loss, attach additional pages to this for .
(7) For each reason specified, provide a separate number count.